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AN ESSAY

ON

Bronchitis :

WITH A SUPPLEMENT,

CONTAINING

Remarks on Simple Pulmonary Abscess,
&c. &c.

By CHARLES BADHAM, M.D.

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SECOND EDITION, CORRECTED AND ENLARGED.

Vereor ne ipse frequentior conspectus morbi nobis imponat, ut ejusdem
naturam perspexisse falso existimemus cujus externam solam faciem
novimus.

STOLL. RAT. MEDENDI.

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TO
HIS ROYAL HIGHNESS
THE DUKE OF SUSSEX.

SIR,

*The permission to dedicate the
First Edition of the following Pages to
Your Royal Highness, was extremely
gratifying to me, inasmuch as it enabled
me to express my sense of various in-
stances of Your Royal Highness's con-
descension. I trust the ESSAY, to*

*which these lines are prefixed, may, at
some future period, become less imper-
fect, while they will continue to record
the respect with which*

I remain,

Your Royal Highness's

Most obedient,

And devoted Servant,

CHARLES BADHAM.

*Clifford Street,
May 9, 1808.*

PREFACE

TO THE FIRST EDITION.

FROM a hope that the Observations contained in this little Tract might be found to contribute something to the illustration of an obscure subject; or at least to excite the attention of such as may not yet have adverted to it—the Author has ventured to give them a greater publicity than they obtained through the medium of his Lectures. That the genus of diseases to which these remarks are directed, is very imperfectly understood, is not a little

confirmed by the promiscuous names under which they have been confounded. *An acute inflammation* of the air-passages, attended with fever, cough, and shortness of breathing, is the principal subject of the following pages. But the Author has endeavoured also to throw the whole of the subject connected with this species of disease into a form somewhat systematic, which may, perhaps, promote its utility.

15, *Clifford Street,*

April 12, 1808.

PREFACE

TO THE SECOND EDITION.

IF what he here meets with shall only reflect the experience of any Practitioner, whose field of observation is extensive, it may not be altogether useless to persons of more limited knowledge and opportunities. Without the smallest solicitude about making a book, I have put down (which I thought it my duty to do) with studied brevity the observations, however slight, which my opportunities have enabled me to make. As to the names and the arrangement

which I have proposed of these diseases, as three species of a genus to which a common term may be given, no person can hold this undertaking to be of slighter importance than I do. I would not even by any means undertake to say, that cases of acute Bronchitis can *certainly* and always be distinguished from other diseases of the chest; nor if they could be so distinguished, would the treatment essentially differ from that which any informed person would adopt for the cure of acute Inflammation affecting any part of the organ of respiration. The importance, however, of attempting a distinction is not inconsiderable, because, though it affect the Treatment

little, it affects the Prognosis much. Prompt and active measures would generally, perhaps, save the patient in Pleuritic, and often in Peripneumonic cases ; but I fear that we should not be authorised to count so much upon success in inflammations of the Tracheal membrane, however early and anxiously our attention were directed to such cases. Such distinctions are further important, as throwing light on the secondary dangers of Hooping Cough and Measles, and therefore in leading on the first appearance of certain symptoms (their cause being known) to a treatment which kept the particular danger in view.

A second edition of this little publi-

cation being called for, I have corrected it as well as my time admitted; I have interspersed such additional remarks as have been made since it was first before the Public. I have also thrown into a Supplement some observations which closely connect with the subject, and which appear to me far from uninteresting, though the question of their novelty is to be determined by the Reader into whose hands they fall.

CONTENTS.

CHAP. I.

	PAGE
Introduction.—Early Opinions respecting Bronchial Affections.....	1

CHAP. II.

Opinions of the Modern Systematics on Bronchial Affections.....	15
---	----

CHAP. III.

Subdivision of the Diseases of this Genus: History of Bronchitis Asthenica, or Peripneumonia Notha.	25
--	----

CHAP. IV.

History of Bronchitis Acuta; with some Cases, and Examinations after Death..	46
--	----

CHAP. V.

	PAGE
Termination, Pathology, and Diagnosis of these Diseases.....	77

CHAP. VI.

Treatment of Bronchitis Acuta.....	98
------------------------------------	----

CHAP. VII.

Treatment of Bronchitis Asthenica.....	110
--	-----

CHAP. VIII.

History and Treatment of Chronic Coughs.....	122
---	-----

SUPPLEMENT.

Observations on Diseases in which Mat- ter is expectorated from the Lungs....	134
--	-----

OBSERVATIONS,

&c &c.

CHAP. I.

Introduction—Early Opinions respecting Bronchial Affections.

THE disease which forms the subject of the following pages, is an inflammatory affection of the secreting membrane which lines the bronchial tubes ; it is liable to end, like other

inflammations, in the production of a purulent fluid, or more frequently in an excess of the natural secretion of the parts ; and death, in either case, may be occasioned by the mechanical obstruction which ensues, or by the impediment produced to the reciprocal operations of the air and of the blood upon each other ; a state of infinite hazard, from which scarcely any patient is found to recover.

As these passages are the immediate recipients of the air, and of course more directly than any other part of the organ of respiration exposed to all those effects which result from its vicissitudes, whether of temperature or of other natural properties, that they

should be peculiarly liable to disease, is a circumstance in itself to be expected, and which might have been inferred *a priori*. The disease to which we find them actually subject from these causes is commonly of an inflammatory kind, and this often to a degree which far exceeds the symptoms of common catarrh. Indeed the catarrhus inflammations of the mucous membrane are chiefly of the asthenic character; but the most striking disease of this genus belongs rather to the acute inflammations. There is besides, so great a variety in the degree, as well as in the leading character of these affections; they are liable to so many

modifications, from season, age, and other circumstances, that the ambiguous language in which they have been described; affords no occasion for surprise.

I. An account of the inflammation of the Bronchial membrane, *in its most acute form*, though it has been touched upon in various writings on practical medicine, has never been regularly drawn up; the disease has hitherto obtained no distinct name, and therefore no place in systems of nosology.

II. A less urgent affection of the same character, decidedly inflammatory, and affecting apparently the same part of the organ, has been

long known, and often described. The first accurate account of it was given by Sydenham; it is the *Peripneumonia notha* of that author, the *Catarrhus suffocans* of Lieutaud.

The *Catarrhus pituitosus*, the *Angina bronchialis*, the *Tussis cum dyspnoea*, &c. are less urgent varieties of the same disease, differing from it only in the degree of violence in which the inflammation exists.

It is the object of this Essay to notice a little more at large than has hitherto been done, each of these affections: but before the immediate design be entered upon, it may not be uninteresting to run over the opi-

nions which have from time to time existed, and are to be found, in medical writings of authority, with regard to Bronchial affections in general.

The term Catarrhus of the ancient physicians, it is well known, comprehended cases of *defluxions* (as they were afterwards called) on the lungs, and was not confined to the more limited affection, to which it is now usually appropriated. The term seems also to have embraced certain acute cases of a catarrhal complexion, which proved quickly fatal*.

* Κατάρρσι συντομῶς ἀπελλυντες. Hipp. Aphor. iii. 12. These pectoral catarrhs were

Important distinctions with regard to the diseases of the organs of respiration, seem to have prevailed at a very early period in the history of medicine; Pleurisy, for instance, and Peripneumony, can hardly be better described at this day than they were described by Aretæus. This writer, after treating of Phthisis, Empyema, and Asthma, describes an affection which he calls Πνευμώδες, and which appears to have been clearly bronchial.

sometimes called βηχώδες (Aphor. iii. 31); sometimes πνιγώδες (Catarrhus suffocativus of the moderns); and some are recorded which had a tendency to end in suppuration: *κατάρροι ἐς τὴν ἄνω κοιλίην ἐκπυῶνται ἐν ἡμερησιν εἰκοσιν.*

He says, that it has an affinity to asthma ; that its symptoms are, great difficulty in breathing, cough, heat, watchfulness, loss of appetite and of flesh, with small frequent pulse ; that it is a disease of great length ; and that it kills some by suffocation, while others fall into an anasarca. Its chief peculiarity, however, is stated to consist in an ineffectual effort to expectorate, or, if any thing be expelled, it is in small, white, round lumps, like hail*.

* Ἀναβησσύουσι ὥς ἀνάξοντες, ματαιοπονεύουσι δέ, οὐδεν γὰρ ἀνάγουσι· ἦν δέ τι τοῦ πνεύμονος ἀπορῥαγίη βίη, σμικρὸν, λευκὸν, στρογγύλον, χαλαζῶδες. In the preceding chapter this dis-

The symptoms here detailed sufficiently indicate a bronchial inflammation—rather, indeed, an extraordinary one, as few patients are now found to *die* of chronic pectoral disease, having its seat in the Bronchiæ *without* expectoration.

About A.D. 450. There is an express section in the writings of Ætius,

tinguished writer notices with surprise, the *confidence and hopefulness of persons expectorating matter from the lungs*, although he does *not* put this down in his chapter on Phthisis, a disease in which we so often and so painfully remark it. *Θωυμα δε ετι τουτεων· τονος μεν γαρ ενσαρκιης μειζων, ΕΥΨΥΧΙΗ δε ΤΟΝΟΥ ΔΥΝΑΤΩΤΕΡΗ.*

bearing for its title, “ Concerning that Affection which is thought to be Pleuritic, but is not.” He speaks of certain viscid and tenacious humours generated in the body, and carried to the lungs : these, he says, *obstructing the air passages, induce a great difficulty of breathing;* under which circumstances, certain physicians, having adopted an erroneous practice of opening a vein in the arm, and drawing off a large quantity of blood, have occasioned the death of their patient. For in this disease (he proceeds) it is not from pain that the respiration is impeded, but simply from obstruction of the air tubes. He recommends

vomits, when the disease has gained so much ground as to threaten suffocation. — *Ætius*, *Tetrabiblon*, II. iv. 68.

*PAULUS ÆGINETA**. — After describing the common affection of the head and nostrils from cold, *gravedo* and *coryza*, this author proceeds to notice, that if the defluxion fall upon the *aspera arteria*, so as to irritate the membrane which lines it, hoarseness is induced, and “the tracheal disease” follows. But this disease, he tells us, is not always

* 7th Century. *Friend*.

or necessarily a consequence of defluxion from the head ; it may result from vehement exertion of the voice, or the respiration of a cold atmosphere ; by which *an inflammatory affection is brought on, and if it be protracted, there follows a cough of malignant tendency.*

About A.D. 1300. ACTUARIUS.—If, says this author, there is *a confluence of the humours, so as to produce obstruction of the air-passages, a difficulty of breathing, great in proportion to that obstruction, ensues ; but it does not always follow, that the substance of the lung is affected. In an advanced stage of the complaint, he remarks, so*

much feebleness to be produced, that the defluxion can with difficulty be relieved by spitting, and that the hazard of that suffocation becomes imminent. — Method. Medend. l. i. c. xviii.

In another passage of his writings, some expectorant remedies, urtica, styrax, scilla, &c. are recommended, “ *to cut the tenacious humours, and exonerate the chest.*”

These authorities might readily be multiplied; but they are sufficient to shew, that notions of pulmonary disease, neither pleuritic, nor depending on inflammation of the proper substance of the lungs, but rather

on an obstructed state of the bronchial tubes, prevailed among the physicians who flourished in the latter ages of the Roman empire, and is mentioned with considerable confidence in their writings.

CHAP. II.

*Opinions of the Modern Systematics
on Bronchial Affections.*

To extend a little farther the rapid glance we proposed to take of the history of medical opinion respecting bronchial complaints, we shall now notice with the same brevity those of the best modern Systematics on the subject of our Enquiry.

In the System of Frederic Hoffmann, a work of much talent and extensive observation, there are various passages which belong to this subject. Of the

Catarrhus suffocativus he relates, that it chiefly destroys the aged, the infirm, and infants; and attributes it to a paralytic affection of the nerves which belong to the organs of respiration *.

* His description of the symptoms is obviously the fruit of personal observation.

“ Trahitur in hoc morbo summa cum difficultate et anxietate spiritus, et quia bronchiis, secedente a sanguine humore viscido seroso, repletis, nihil tamen sputi rejicitur aër admissus strepitum et ronchum in fistulis edit, donec præcluso penitus aëre, æger suffocetur. Quod antiquam evenit pulsus aliquot sæpe ante horis intermittit, sensim gracilescit penitusque intercidit: non nunquam etiam mentis turbatio cum extremorum

The description of a disease under the name of Peripneumonia notha, which we owe to the illustrious Sydenham, has been regarded (perhaps erroneously) as an original account of an affection of the lungs not previously known. He appears rather to have represented with greater fidelity and correctness than others the sub-inflammatory affection of the bronchiæ. One of the causes which may occasion difference between his account and

frigore supervenit.—Med. Rat. Syst: sect. i. 17. xvi.—No writer but Hoffmann has remarked this last, which is, however, only an occasional symptom.

those of other writers, is probably this —that he describes the disease quite in its incipient state. But the complaint is insidious ; its first symptoms, therefore, would readily be overlooked by less accurate observers ; whereas, in its advanced stage, with the symptoms of *Catarrhus suffocativus*, nobody could fail to recognise it*.

*—“ *Primo febris insulsu nunc incalescit æger nunc friget. Vertiginosus est : de capitis dolore quæritur lancinante quoties tussis importunius fatigat : urina turbida cernitur et rubens intense : sanguis detractus pleuriticorum sanguinem refert. Anhelus sæpenumero spiritum crebro ac celeriter ducit ; si moneatur ut tussim provocet, haud aliter dolet caput, ac si in partes mox*

In this description of Sydenham, several material symptoms are noticed, which belong chiefly to the first stage of the disease, and serve to mark its essential character. The state of the pulse, the peculiarity of the respiration, the appearances of the blood and of the urine, and the head-ach which attends, are all important particulars; and if the description itself were in any respect defective, if it had left us in doubt whether the affection were of an inflammatory nature or not, the practical directions which follow would remove it.

*dissiliſſet. Dolet et thorax omnis, pulmonum
coarctatio auribus adstantium percipitur."*

How it happened that Lieutaud, after reading this excellent description, and adopting most of the symptoms into his own, could bring himself to believe that it was owing to an obstruction of the blood-vessels, “*a phlogosi plane alienum*,” it is difficult to comprehend. Such is the opinion, however, which he expresses in his account of *Peripneumonia notha*.—*Synop. Univ. Prax. Med.* vol. i. p. 198.

In another chapter, the same writer describes the *Catarrhus suffocans*. Of this disease he makes two species; one proceeding, he says, from a *spasmodic constriction of the glottis*; the other, a *bronchiorum infarctu*.

Here he rests, as Hoffmann had done, and all the earlier writers; and resting here, is not at all more advanced in his pathology than *Ætius* and his cotemporaries. But infarction of the passages is merely an effect: an increased action of the vessels on their surface, sometimes amounting to real inflammation, at others, to what may be called a sub-inflammatory state, is plainly the cause, and perhaps the universal cause, of these obstructions.

Dr. Cullen, in his observations on the pathology of this disease (his description being merely that of Sydenham), considers it as a catarrhal af-

fection, which in its progress excites *some degree of pneumonic inflammation, and destroys life by a serous effusion.*

The Peripneumonia notha of Sydenham is, without doubt, an inflammatory affection of the bronchiæ; but not of that kind in which a production of purulent matter takes place: this is now, I believe, the prevailing sentiment of the medical schools*.

* “ Peripneumonia notha, fortior bronchiorum catarrhus est, quo frigida et humida sub tempestate, ab accedente membranæ mucosæ hos canales investientis irritatione, copiosior tenaxque pituita celeriori passu secreta, bronchiorum fines

Vogel inserts, among the diseases of the order Adynamiaë, one which he calls Pnigma, subjoining the term Catarrhus suffocativus as a synonym. But his definition of Pnigma is nothing but a description of suffocation.

Sauvages, in describing the Rheuma

opplendo suffocationem sat citò minatur, quàm ob dolorem aut ob primarium inflammationem spiritus præcludatur." The remainder of the account, which is perhaps one of the best on the subject, is too long to transcribe.—Frank de curandis Homînum Morbis, vol. ii. p. 138.

"*Inflammatio* subinde bronchia eorumque ramificationesprehendit; *inde febris acuta*," &c.—Stoll Aphoris. de Feb. cxxviii. See also the Ratio Medendi of the same Author.

catarrhale, has given a very sensible account of these diseases, and judiciously explains them on the principles which have been already advanced*.

* “*Membrana mucosa quæ vias ærias pulmonum obducit levi phlogosi afficitur.*”

CHAP. III.

Subdivision of the Diseases of these Parts ; History of Bronchitis Asthenica, or Peripneumonia Notha.

It has been already noticed, that the bronchial tubes are, from their structure and their office, in a state of natural predisposition to disease. They are more immediately exposed to the influence of the atmosphere, and to the effects of cold: the quantity of surface which they present in their various ramifications is great; they are, besides, highly vascular, abound with mucous glands or follicles, and numberless small vessels open into their

cavity to supply the halitus of the lungs. Under such circumstances, it is only wonderful that they do not more frequently suffer, and there can be little doubt, that the mucus which their surface secretes, affords them a most necessary protection; yet the hazards to which they are exposed by atmospheric vicissitudes, which cannot be diminished by any precautionary system, are still considerable. It is needless to pursue this subject; let us rather inquire into the history of the diseases to which these parts are so much exposed.

Much of the variety in the character of Bronchial affections depends, it is probable, on constitutional peculiari-

ties of the individuals who become their subjects, though it will also have some connexion (which is plain from the identity of symptoms during the prevalence of influenzas) with the nature of the exciting cause. Whenever, for instance, an healthy vigorous person, of middle age, is attacked, the symptoms of strong re-action and high inflammatory fever will be found, not, perhaps, inferior in violence to those which would attend a pleurisy in the same individual. If, again, it attack a person of sedentary habits, debilitated by intemperance, or other causes, whose best health is scarcely more than exemption from specific disease, the artizans, for instance, of the me-

tropolis*, a series of symptoms, less prominent, indeed, but scarcely less hazardous, will ensue, and a fever, which partakes of the low nervous character, will attend them. Others, in the decline of life, and with many indications of a broken constitution, who have perhaps just strength enough to maintain for a while a chronic inflammation, become the subjects of the disease under a third modification.

A consideration of these varieties may perhaps supply a nomenclature sufficiently appropriate, by which to

* “ Καταλυμáινονται γάρ (αἱ βαναυσικαὶ τεχναὶ) τὰ σώματα τῶν τε ἐργαζομένων, καὶ τῶν ἐπιμελομένων, ἀναγκάζουσαι καθῆσθαι καὶ σκιατραφεῖσθαι ἐνταῦθα δὲ καὶ πρὸς πῦρ ἡμερένειν.

Xenoph. *Æconom.* l. iv. 2.

distinguish the several species. If the term Bronchitis be appropriated to the genus, we may distinguish the three principal species by the epithets of *acuta*, *asthenica*, and *chronica*.

To the first of these, the Bronchitis *acuta*, belongs the disease shortly to be described: the second, Bronchitis *asthenica*, is designed for that which now bears the name of Peripneumonia notha; and to the third belong Chronic coughs, Tussis cum dyspnœa, Catarrhus pituitosus, Catarrhus senilis, &c. of which there are many varieties, into which it were needless to enter. At any rate, whatever may be thought of the third species, there is ample ground for distinguishing the two former, which I

apprehend may be sufficiently well effected by the terms proposed.

But in place of following that order in description which seems more natural in arrangement, it will perhaps be better to describe in the first instance, the *Bronchitis asthenica*, as it is the more familiar complaint, and will therefore constitute a more convenient standard of reference.

Of Bronchitis Asthenica.

After exposure to cold, and some incipient feelings of disorder which the patient does not particularly advert to, he finds considerable oppression and uneasiness in breathing, which is in some instances attended with an obtuse pain about the præcordia, or

by a general sense of weight, anxiety, and tension all over the chest. The respiration is commonly more frequent than is natural, and is attended very generally with a wheezing noise, peculiar to affections of this description. If the patient be desired to make a deep inspiration, in order to extend the chest to its full capacity, his effort is either interrupted by a fit of coughing, or his uneasiness increased, while the pain, if any existed, is aggravated. There is no sharp pain in the side, but rather a diffused sensation of soreness. The dyspnœa becomes more considerable if the patient attempt to lie down, and he therefore prefers a raised posture; though he is commonly able to rest on

either side indifferently. In addition to this constant dyspnœa, there are cases, in which a symptomatic asthma is superinduced. The patient is subject three or four times in the day to a manifest aggravation of the difficulty in breathing, a sudden constriction across the thorax is complained of, which, sometimes extending to the larynx, prevails to so great a degree, as to prevent the voice from being articulate. In a short time, however, such spasmodic exacerbations remit, and the complaint resumes its usual level.

At the same time with the dyspnœa, or soon after, a Cough commences, which is at first unattended with ex-

pectoration, and often remains obstinately so for the first two or three days: it is frequently (but by no means so constantly as might be expected), attended with hoarseness. If the disorder take a favourable turn, the expectoration of a thick, whitish, frothy mucus comes on, and usually, but not constantly, relieves the symptoms. Its quantity is at first not great; in a very few instances it has been streaked with blood, and is brought off without much effort, the violence of the cough diminishing, while perhaps its frequency remains*.

* In the first stages of the inflammatory complaints of the Bronchiæ, there is little or no secretion: the ordinary function of the part is stopped just as in croup, where the want of the moisture

Such are the symptoms, as they affect the organs of respiration. The urgency and danger of the disease is undoubtedly to be estimated by that of the dyspnœa which attends it,

necessary for the lubrication of the passages, occasions the noisy inspiration which it is so distressing to hear. After the first violence is subdued, and the secretions are in some measure restored, the expectoration may be difficult from various causes:—early in the complaint, from the scantiness as well as from the viscidty and adhesiveness of the mucus: later, from its redundancy, and the debility of the muscular action of the parts. Pus, liable to neither of these accidents, is generally extricated without difficulty. This is noticed and explained too by Aretæus. *ρηδιως αναφερεται . . . ——— πολυτρητος γαρ ὁ πνευμων, επογγιη ικελος, ου χαλεπαινων τῷ υγρῷ αλλην απ' αλλης ευρυχωριν αμειβων τη μεσφι της τρηχειης αρτηριης ἡκειν. ευκαρπης γας καὶ ολισθηρον το πνον· αταρ καὶ αναπνοη ακω το πνευμα φυσῇ. Χρον. Παθ. Β. Κε-*

which is often exceedingly great, while the cough is by no means so.

A violent tensive pain just across the forehead, intolerably aggravated by every fit of coughing, is a symptom which, though not universal, is certainly met with in the greater number of cases, and which remits only with the primary inflammation.

The tongue invariably exhibits some deviations from the natural state. The digestive powers are at a stand; the patient is not merely indifferent to food, but commonly loathes it as much as in fever; he has thirst, and the urine is constantly loaded, turbid, and high coloured.

The pulse in this disease has some--

times all those characters of hardness, fulness, and frequency, which indicate the greatly disturbed state of the circulating system in highly inflammatory affections. But it is more usually that sort of pulse which we find connected with the acute rheumatic affections of the metropolis, increased in frequency, diminished in strength, with some hardness.

The heat of the surface is often not much increased, except towards evening, when, as in other febrile affections, the patient may become hot, restless, and uneasy. The skin is, however, usually in an obstructed state, and it is difficult to excite diaphoresis.

In moderate cases, in the course of a week or ten days, these symptoms decline, the breathing becomes gradually improved, and the desire for food returns. But the cough will still remain, from the increased irritability of the passages, for a considerable time, nor does the patient altogether recover his strength till some weeks have elapsed ; much, however, of the quickness of recovery depends on a favourable state of the atmosphere. Lastly, this complaint, it may be added, is one of those which generates, in a remarkable manner, a pre-disposition to a future attack.

Such is the common course of the *Bronchitis asthenica*, or *Peripneu-*

monia notha : its danger chiefly consists in its power of debilitating to a great degree, not only the constitution in general, but specifically the parts which it attacks ; hence, a redundant secretion of mucus, in unfavourable cases, comes on, expectoration ceases, and the patient is suffocated.

But there are other ways in which it terminates ; it sometimes becomes the origin of a spurious consumption, and it is no uncommon thing to subdue the violence of its symptoms, and yet not to conquer the disease. The patient recovers perhaps a little strength, and leaves his bed, but his respiration continues uneasy and oppressed. The cough and spitting, though mitigated.

in violence, continue to harass him ; his pulse becomes more feeble and frequent, and a general debility takes place, attended with a decided loss of flesh. He becomes subject to irregular sweats, and in the course of a few months the emaciation often makes rapid advances.. A person who sees this complaint after it is formed, and some time established, is ready to conclude, that he has to deal with ordinary Phthisis pulmonalis ; but if he take pains to trace it from its origin, he will often discern that it is an affection essentially different from consumption, however strong the resemblance in external character. There are besides some grounds for distinguishing the two affections. Pa-

tients in an extreme state of debility and emaciation, consequent to bronchial inflammation, will distend the chest to its full capacity without feeling much uneasiness, and not any pain, because the structure of the lung, or the investing membrane, is not diseased. They lie down in bed much more easily than consumptive patients, have no shooting pains in the chest, and though they sweat, it is from weakness; there is nothing like that profuse discharge from the skin which produces the solution of the hectic paroxysm. The appearance of the sputa may properly be taken into the account, but cannot be exclusively depended upon.

Every person who has been in the

habit of seeing this disease, has probably noticed its termination, as above represented, in a fictitious consumption. In the *Ratio Medendi* of Stoll, there are some correct observations on this express subject, and the passage is perhaps worth transcribing. *Ratio Med.* vol. vii. p. 10.

“ *Prout peripneumonium veram, subinde vera quoque phthisis excipit et suppuratoria, ita notham peripneumoniam, excipit phthisis pituitosa, seu æque notha. Febre ut plurimum carent, tussis assidua, vesperi major, cum repleti thoracis et nonnunquam quasi exulcerati sensu; sibilus; strepitus inter tussiendum; vesperi noctuque orthopnoea; sæpius aut semper ferme asth-*

matica respiratio. Sputa copiosissima, flava, flavo-viridia, aspectu pus referentia sed pure multum consistentiora, et tenacia ductil aque instar pastæ ductilioris. Emaciantur ut sceleta sint mera, cute rugosa, crassa, pendula, furfuracea, imperspirabili elephantina. Hoc rerum statu levantur a lichene, curantur a decocto corticis Peruviani."

This account agrees, in most of the essential particulars, with the experience of the Author: but not altogether; for one of the essential symptoms of fever, frequency of pulse, he believes will be universally found in the spurious as in the genuine consumption: were it not so, the diagnosis would indeed be simple; so far is this from being

true, that the disease in question has not seldom proved the occasion of considerable perplexity. But as patients who appeared to be irrecoverable, and beyond the reach of all medicine, have been found to get well almost without any, have recovered very unexpectedly their flesh and strength, and have assumed all the marks of a spontaneous convalescence, he has no longer any doubt that under a variety of circumstances, the mucous membrane takes on a peculiar action, producing many of the symptoms of genuine phthisis, yet under proper treatment, (sometimes by the unassisted efforts of Nature,) returning to an healthy condition. The diagnosis of

pulmonary consumption is by no means always obvious, and many of those cases in which medicine has appeared so successful, and where certain remedies have acquired so much reputation, have been really of the pseudo-consumptive kind *.

It will be repeatedly observed by all who pay attention to the progress of Chronic pectoral diseases, that a patient shall be confined a whole winter to his apartment, or be very little in a capacity to leave it, shall become

* In correcting this passage for the second edition it may be proper to notice, that Dr. Duncan, sen. of Edinburgh, announces a volume on the subject of the *Different Kinds of Consumption*.

greatly extenuated, and appear to his friends to be in an hopeless condition, yet so soon as the milder temperature of the advancing season shall be felt, he will gain a little ground, and the progress of the summer effects his recovery. In the next winter, however, the slightest accident is sufficient to excite a fresh attack.—These are cases in which a change of climate would in all probability be the most beneficial measure which could be adopted. The *lichen islandicus* will often render very considerable benefit to such patients, but it has not appeared to merit the high character which Stoll has given it.

CHAP. IV.

*History of Bronchitis Acuta ; with
some Cases, and Examinations after
Death.*

AN attack of Bronchitis acuta takes place after exposure to cold and moisture, like other pulmonary affections ; but it comes on more suddenly, and, in place of the insidious manner in which peripneumonic disease often creeps upon the patient, shews its formidable character from the beginning. The patient is attacked with a sense of constriction, or other uneasy feeling at the chest : his breathing is

hurried, anxious, laborious ; the efforts of all the voluntary muscles which can be called into action, rendering the oppressed state of the lungs sufficiently evident. Cough, if it has not began with these symptoms, soon succeeds ; and though some expectoration attend, there is little or no relief derived from it. The skin is dry, the tongue foul, and the urine high colored and scarce ; the pulse, however various in other respects, always hard ; the necessity of immediate venesection for the most part obvious.

Wheezing is not in this stage a constant, perhaps not a common symptom. If the disease remain for a few days unsubdued by proper treatment, or have

been hitherto neglected, the symptoms of excessive action suddenly disappear, the pulse becomes quite feeble, and of almost countless frequency; partial sweats break out at intervals; and the patient, after spitting up an immense quantity of sputa various in appearance, till from feebleness he can expectorate no longer, dies from the accumulation: the last hours, in such cases, exhibiting very dreadful struggles with disease, and the patient often becoming delirious before he sinks under it.

This disease, it is obvious from the description, resembles, except in the pain of the side, a sharp attack of pleurisy; but in the violence of the

symptoms, and the rapidity of their progress, it much surpasses any pleuritic affections which have fallen under the observation of the Author : it frequently destroys life within a week from the attack, which other inflammatory affections of the lungs very seldom do ; the *suddenness* of the conversion from the state of inflammatory action to that of irremediable debility, is particularly striking, and will be invariably found to attend it ; and though this debility will be observed in all the functions of the body, yet it is the pulse which most unequivocally shews it. The effect indeed produced on the circulation in inflammations of the

bronchiæ is so striking, as to have been long since particularly noticed*.

As other pectoral inflammations exhibit various degrees of violence, so these must be expected in affections of the bronchiæ ; and in cases which undoubtedly belong to the same genus, symptoms considerably less striking will sometimes occur : but it seemed proper to give the description of the disease as it affects patients of previous

* See a case described in the 3d volume of the Edinburgh Medical Essays, by Dr. Alexander Monro, intitled “ An Asthma with uncommon symptoms.” The patient was cured ; but two relapses brought back the same remarkable “ *loss of pulse*” which had at first attracted attention.

health, where it will shew its genuine characters, unobscured by the debility which so often modifies and obscures the symptoms of phlogistic diseases.

Of the rapid progress of these cases, and the manner in which they have a tendency to terminate, if not very promptly arrested, the following will be sufficient evidence.

A strong man of forty heated himself by violent exercise on one of the Easter holidays, and got suddenly cooled. He found himself ill in returning to town at night, went immediately to his bed, and was attacked with symptoms like those above related. He was seen on the second day; and twice bled with very inadequate relief. Every

other measure which seemed likely to be of service, was of course adopted ; but he died within the week.

The chest was examined the day after. The bronchiæ were completely plugged up by a thick tenacious secretion ; but the lungs *were perfectly sound, and there were no adhesions, or other marks of disease.*

In the early part of the last winter (1808), a man aged thirty-five, who had been troubled with an inconsiderable cough for some weeks before, felt an attack on his breath while working in the open air. The cough became incessant, and he expectorated a great quantity of thick greenish-yellow sputa ; the dyspnœa, in place of being reliev-

ed, becoming rapidly worse. On the third day after the attack, he was visited ; the symptoms of extreme debility had already appeared ; he was unable to breathe, except when the trunk of the body was elevated. The respiration was very frequent, and attended with a singing noise like that of water beginning to boil. His pulse resembled that of a patient in the last stage of typhus fever. His countenance was very pale, and his expectoration soon began to be less frequent and presently ceased. He lived, however, two days longer, and was delirious some hours before he died.

On examination, the lungs were per-

fectly sound, and free from adhesion. The bronchiæ were not full, as it was expected they would be, of that secretion of which so great a quantity had been expectorated; *but marks of inflammation on the surface of the larger branches were sufficiently distinct.* The operation of an emetic taken a few hours before his death, had probably removed the secretion, which had accumulated, and the debility prevented the formation of more.

A young healthy woman, aged nineteen, who took cold, by watching her sick child during very cold nights, died in a week, under the well-marked symptoms of bronchial inflammation.

She was seen when it was too late to attempt any active measures for her relief. The chest was not examined.

A child of about two years old laboured under difficulty of breathing after the measles. The respiration was frequent and noisy, and considerable fever attended. It remained ill for above a fortnight, and latterly became emaciated. On examining the chest, the lungs were entirely sound, but the bronchiæ were *completely filled with a secretion of a more fluid consistence than usual, and of a purulent appearance.*

In conversation about this time with his friend Mr. Copland, Surgeon, (then of the 2nd Regiment of Guards,) the

Author learnt that several men under the care of that gentleman had died during the preceding winter, of bronchial inflammation ; and that the nature of the disease had been in some of the cases decided by examination of the parts. The following accurate report of one of those cases, which he was so obliging as to furnish, is too important to be omitted.

“ On opening the body of a young man who had been supposed to have died of inflammation of the lungs, I could discover no adhesion, suppuration, or other mark of inflammation on the surface of the lungs ; but on opening the trachea, it was found quite full of a fluid like the secretion of inflamed

membranes; the inner membrane of the trachea and larger branches of the bronchiæ were very vascular, and loose pieces of coagulated lymph floated on the fluid — in short, the parts were highly inflamed. All I can now learn of the symptoms, is, that he had much fever, great difficulty in breathing, but little or no pain; that he laboured under the disease for near a month, and that he was repeatedly bled, but without the relief it usually affords in pulmonic cases. For the last week his pulse was irregular, his countenance livid, and he could not breathe without his chin being in contact with his breast.”

Since the above case occurred, ano-

ther came under the observation of the same gentleman, but of which he had no opportunity to notice the symptoms or the progress. A soldier was brought into the hospital, and died four hours after. 'The body' had been already examined, and the cause of his death was unascertained; but from some conversation which had recently taken place on the subject of bronchial inflammation, it was thought worth while (as the man had died apparently of some pulmonary affection) to examine the trachea. It was found (with the larger branches of the bronchiæ) in a high state of inflammation. The portion of the membrane which covers the cartilages of the larynx exceeding-

ly thickened, and the diameter of the passage much contracted. The parts were taken out, and are in the possession of Mr. Chevalier.

In the first volume of the Medical Transactions, there is a curious account, by Dr. Warren, of the bronchial polypus. A young lady had fever, shortness of breath, cough without expectoration ; which, after being somewhat relieved by bleeding, and cathartic medicines, terminated on the twelfth day by the vomiting of a large polypus concretion, which exhibited a cast of the ramifications of the bronchiæ, in which it had been formed. Of these concretions, several were rejected ; their length was from two to four

inches; one extremity ragged, the other exhibiting a regular ramification into small and almost evanescent twigs. In this paper, some references are given to authors who had previously described bronchial polypi, but had considered them as blood vessels. It may be taken for granted, that these singular substances were products of inflammation, and that they resembled the morbid secretion of croup.

Since his attention has been first excited by this important disease, the Author has seen a very considerable number of cases of it, (many more since the publication of the first edition,) to which, however, partly because some of them have been deficient in that species

of evidence which is supplied by examination after death, and partly from a desire to compress the subject into moderate limits, he is unwilling to advert more particularly. He feels, however, the propriety of noticing in this place a valuable communication of his friend Mr. Chevalier ; by which, in all probability, his own attention (as he had the happiness of being associated with that gentleman for several years in the medical business of a large dispensary) to the phenomena of this disease was first excited.

In all the cases recorded by Mr. Chevalier (*Med. Jour. May 1802*) the parts were examined after death. In all there was a striking similarity in

the appearances ; *the lungs, on opening the chest, did not collapse, and were perfectly sound.* Appearances of inflammation in the trachea and bronchiæ were noticed in all ; and the tubes, with the exception of one case, in which an emetic had been given, were full of that secretion which had produced suffocation.

But the importance of those cases is such, that the reader will not be displeased to see them consigned to a tract expressly on the subject of the complaint.

Mr. Chevalier has given to his cases the name of *Cattarrhus suffocativus*, or *Coryza trachealis*. The first was that of a young man, about twenty years

of age. The disease at the beginning had every appearance of an attack of mild typhus. On the two first days there was no affection of the chest whatever. On the third day the patient complained of a pain in his side, to which a blister was immediately applied. The symptoms of general debility were such as to forbid the use of the lancet. On the morning of the fourth day he was relieved, but in the evening great difficulty of breathing came on; he was, however, able to walk out of his room so late as nine o'clock. After this he went to bed, but in the middle of the night, awoke complaining of a sense of suffocation, became exceedingly irritable and pas-

sionate, and died at three o'clock in the morning.

“ We examined the body (continues the author) about nine hours after death, and on opening the chest, it was observed that the lungs did not collapse ; we therefore expected to find them adhering to the pleura, but this was in no degree the case. The lungs were entirely free from any mark of inflammation or alteration of structure, nor was any fluid effused into either side of the thorax, or into the cavity of the pericardium. On laying bare the trachea, and making an incision into it, an immense quantity of thin mucus gushed out, with which both it and the bronchiæ were completely filled ; a con-

siderable quantity was also pressed from the air-cells of the lungs. The inner membrane of the trachea, and its branches appeared much more vascular than usual, there was no effusion of coagulated lymph, but a few flocculi of that substance were observed in a part of the mucus, which was contained in the subdivisions of the bronchiæ. The contents of the head and the abdomen were sound."

The second patient was between thirty and forty, and was not seen till about ten days after the commencement of his indisposition. At that time he appeared extremely languid, had a small weak pulse, some difficulty of breathing, and rigors,

After the use of a blister and an emetic, he went on for a week without any material alteration of his symptoms. On the eighth day his breathing became more oppressed, and he complained more of cough and pain over the whole chest. As his debility did not appear greater than it had been, six ounces of blood were taken away. In the evening he became more restless and delirious. About five next morning he awoke in a violent fit of delirium, and died, apparently suffocated, in about half an hour. The following is the account given of the dissection.

“The lungs in this case did not collapse when exposed, but they were

not in the least inflamed, or diseased in their structure. The trachea and its branches were completely filled with the same kind of mucus as in the former case; some was found in the air-cells. The membrane lining the trachea, had also the same appearance of encreased vascularity. The head was opened, but no mark of disease discovered in it, or without the cavity of the abdomen."

The two next cases were in children about four or five years of age. Both had slight pectoral affections for a week or ten days, which had excited no particular alarm, but were followed at length with a degree of stupor, which gave rise to a suspicion that

mischief had taken place within the head. Both of them died convulsed. There was no disease whatever within the head of either, but in both, the trachea and its branches were filled with thin mucus, and its inner membrane was slightly inflamed. The lungs collapsed but very inconsiderably when the thorax was laid open, and yet very little mucus was contained in the air-cells.

The fifth case was a child about two years old. On the fourth day after the eruption of the measles, the patient became stupid, and lay with his eyes half open, and took no notice of any thing ; but, on examining the

eyes, the pupil contracted properly, and the child when roused appeared perfectly sensible. The next day these symptoms continued, the countenance was bloated, but florid; the breathing was short, but not that shortness which arises from inflammation, and it produced a sense of pain on extending the chest, but seemed as if the chest did not contract properly in expiration. The pulse was very frequent and feeble, but not at all hard. After a considerable variety of treatment, which seemed to give a temporary relief, on the eighth it became extremely languid; and died, after a short fit, apparently exhausted, on the morning of the ninth

day. The following were the appearances after death :

On opening the chest the lungs did not collapse, but were free from every appearance of inflammation or adhesion. The bronchiæ were filled with mucus, and the trachæa had undoubtedly been so, for its inner membrane was exceedingly red, much more so than in any of the former cases, and the mucus in the bronchiæ had the same appearance as in them, with flocculi of coagulated lymph intermixed in it.

On turning over the pages of those writers who have engaged in the useful task of recording morbid appearances, a considerable addition to

the evidence already detailed might very easily be made. There are some cases in Bonetus which are worth referring to, though perhaps the titles of the histories delivered will supply all the information which may be desirable.

Lib. II. 2. *Dyspnœa a lenta pituita intra tracheam.*

4. *Orthopnœa ab inflammata aspera arteria.*

9. *Suffocatio a materia viscida bronchia obturante.*

62. *Asthma ob pulmonum meatus pituita infarctos.*

From what has been said, it is plain

that there is a striking analogy between this disease and the Cynanche trachealis. It is in fact an extension of the inflammation, which in the croup is confined to the trachea*. The analogy is in no respect more striking than in the marked division of both diseases into two stages, in the latter of which we are mere witnesses of the resistless power of a disorder against which we are destitute of remedies. All that can be done in either case must be done at first.

* In Dr. Cheyne's work, however, it is particularly noticed, that in the fatal cases of croup, the *Bronchial vessels are inflamed and greatly obstructed throughout*. The observation above, which is nothing more than the expression of a common opinion, is therefore to be corrected.

It seems to be in the highest degree probable, that the secondary pectoral symptoms of measles, and the dyspnoea which supervenes to whooping cough, have usually their origin in this affection of the bronchiæ. In one of the cases above related, this supposition was confirmed by an examination of the lungs*.

H. Daniel

The measles indeed are marked by catarrhus inflammation, and may well be supposed to have a tendency to tracheal effusion. The disease begins

* There is a corresponding case given by Lientaud, Hist. Anatom. Medica. l. ii. Obs. 4. (a). A child died of measles; the bronchiæ were full of a purulent secretion, "pulmonibus inculpatis."

with an inflamed state of the mucous membrane of the nostrils, the head, &c. which declines as the eruption appears. Now, as when this has completed its course, the chest is generally affected, the secondary affection may be readily supposed to have its seat in another portion of that membrane, which so invariably exhibits the symptoms of the incipient disease.

With regard to hooping cough, whatever be its proximate cause, it is obvious that the bronchiæ must materially suffer from perpetual concussion, and therefore the inflammatory symptoms which often affect the lungs in the course of this disease (symptoms in which almost the whole of its

danger consists, and which seldom appear in its early stage), may be rationally supposed to have their origin in that affection of the mucous membrane which we have been considering. At the same time, it is not to be denied, that whooping cough sometimes proves the occasion of a true peripneumony*.

* This last point, the connexion of whooping cough and bronchitis, has received a very careful discussion from the pen of Dr. Watt of Glasgow. The Reader will there find the fullest account of that untractable disorder, to which the attention of Dr. W. was drawn by its distressing and fatal prevalence in his own family. See Dr. Watt's Treatise on Whooping Cough, &c. 1812.

The last edition of Dr. Cheyne's valuable

work on the Pathology of the Larynx, has also fully proved that *Tracheal obstruction* is by no means the cause of death in croup, but that the bronchiæ are inflamed throughout.

CHAP. V.

Termination, Pathology, and Diagnosis of these Diseases.

ANOTHER circumstance connected with the subject of this inquiry, respects the nature of the secretion, the accumulation of which has been found to occasion death in most cases of bronchial inflammation. This is usually nothing more than the mucous fluid, with which these organs are in an healthy state so constantly supplied. But it has been the opinion of many persons of judgment and observation (nor is the opinion by any means new),

that the membrane of the bronchiæ, under inflammation, sometimes forms a true purulent secretion, *without any abscess or vomica*. The following circumstances will tend to support this hypothesis; they respect one of the patients whose case is described above.

This person was under treatment during the whole of the winter preceding that in which the fatal attack took place, with cough, dyspnœa, and fever. He was long confined to his bed, and at last grew so emaciated, that his recovery seemed impossible. The expectoration was excessive, often of an unmixed green colour, and having in all respects the appearance

of pus. He had besides the symptoms which attend the formation or absorption of purulent matter; he had shiverings succeeded by fever every evening, and sweated profusely in the night. It seemed to the observer, that the lungs must contain some very large vomicæ, to supply so great a quantity of matter; yet he could, when desired, expand the chest without any considerable uneasiness or difficulty. At the beginning of June, the patient had apparently not many days to live, yet notwithstanding these most unfavourable appearances, the mild weather, in a few weeks, gradually restored him; he recovered his flesh and strength, and resumed his em-

employment; nothing remaining but a slight cough, to which he had been long subject. He was, however, unfortunately again attacked at the beginning of the winter, and was cut off in a week with symptoms similar to those which have been related. The lungs, as stated above, were found on examination to be entirely sound. Now, as the sputa of the preceding winter and spring were of purulent appearance, and the symptoms those which attend the formation of matter, the pus must necessarily have been formed by the inflamed surface of the mucous membrane. There are several very distinct cases which support this opinion recorded by Lieutaud,

and it may not be uninteresting to quote an example or two from his valuable work.

“ Febre laborabat octennis puer cum tussi et anhelitu difficili. Vox erat clangosa cum levi deglutiendi difficultate. 4to ab insultu die ad æthereas sedes convolavit.

“ Tubus trachealis extus oedematosus videbatur. Ejus facies interior *levi phlogosi correpta materia crustacea obtegebatur* Bronchiæ et vesiculæ pulmonales *pure scatebant esti intacta erat pulmonum substantia.*”—Hist. Anat. Med. lib. i. sect. i. 4.

“ Puerum triennem, vultum sub-tumidum habentem, invadit febris cum tussi sicca, et anhelitu, urgenti-

bus nauseis propinatur emeticum, quo ejicitur materiæ mucosæ copia. Dein exacerbatur morbus, vires deficiunt et 3tio die mors advenit.

“ Reperitur in trachea et bronchiis *mucus purulentus*. Quo adempto, patebant *leves phlogosæos reliquæ*.”

Another case terminated fatally on the fifth day. The dissection shewed the bronchiæ and vesiculæ pulmonales full of purulent mucus, “ *integrîs pulmonibus*.”

A child of sixteen months died with a pectoral disease. On examination: —in conspectum veniebat bronchia et trachea latic mucosæ et nonnihil purulento obstructa et *levi phlogosi tacta*.

In the work of the same writer on

the practice of physic, there are more instances of this kind ; among others, the following is very distinct.

“ Comperiunter bronchia muco glutinoso vel *pure concreto* infarcta, vasa circa hæc reptantia, plus æquo *turgida, varicosa.*”

Morgagni, De Haen, and Home, are quoted as the authorities for these cases. They prove (besides the point for which they have been cited) the uncommon celerity with which this disease advances to a fatal termination.

It seems then sufficiently clear, that the inflammation of the mucous membrane of the bronchiæ is sometimes merely the superficial inflammation of

catarrh, while at others it has a greater resemblance to the phlegmonous inflammation of the proper substance of parts.

It has been above noticed, and confirmed by the authority of Stoll, that the Bronchitis asthenica often ends in a *spurious consumption*: such also may be the termination of the acute. Some time ago a case occurred in the author's practice, in which a severe attack of the complaint was not wholly subdued by the active measures adopted with that view ; but, notwithstanding repeated bleeding, it terminated in a chronic inflammation of the parts, productive of cough and spitting, emaciation, and perpetual dysp-

nœa, from which the patient has been never since exempt, except during the warm months of summer.

Pathology.

The pathology of these diseases will not require a very long discussion. The violent pain across the forehead, which constitutes so frequent a symptom of one of them, may depend on an inflammatory state of that portion of the mucous membrane which lines the frontal sinus. This head-ach essentially differs from that which is connected with disorders of the alimentary canal, nor is it removed but by those remedies which diminish the primary inflammation in the chest.

The wheezing noise in respiration, another peculiar symptom, does not depend on a mechanical interruption to the reception of the air, produced by mucus obstructing the passages; for it will constantly be noticed; that this noisy breathing is most considerable in the first stage of the disease, before there is any secretion; and that when the inflammatory tension is taken off, and the patient begins to spit freely, it is greatly moderated, and in general goes off entirely. This symptom is therefore owing to a certain constricted state of the parts, a greater rigidity or straitness than is natural, excited by the inflammation which affects them. The occasional exacerbations of the

dyspnœa, which have been noticed above, may also be explained upon the same principle. An inflamed surface is predisposed to spasm; and the slightest occasional cause, under such circumstances, will very often be sufficient to excite a fit of this symptomatic asthma in those who labour under bronchial inflammation. Thus, too, in the *Cynanche trachealis* (to which, as has been noticed above, this disease bears more than a loose resemblance), though it be essentially an inflammatory affection, yet practical writers have always remarked, that it is subject to spasmodic exacerbations.

There is, however, another kind of noisy respiration, which really depends

on the *presence of the mucous secretion* in the bronchiæ, and the obstruction it occasions to the admission of the air. But we find this more commonly in children : with them, indeed, it is particularly frequent, because they employ no voluntary efforts to relieve the chest.

To this sort of respiration Bonetus alludes :

“Dyspnœa est sine sonitu ubi materia occupat propriam pulmonum substantiam, non vias. Seu hæc incidat in bronchia tunc sonitus accedit.”

With respect to the sudden occurrence of that extreme debility in the more acute bronchial affections, which extinguishes all hope of saving the patient, it may probably be in some mea-

sure explained, by considering that those changes which are wrought upon the blood, in its transmission through the lungs, by the agency of the air in respiration, must be very much impeded when the secretion is great; that the mucus forms a varnish which tends to diminish the communication between the blood vessels and the air vessels; that the blood so imperfectly supplied, no longer stimulates the heart to a just degree of action; the circulation therefore becomes languid, and the pulse sinks. In one of the fatal cases of which the particulars have been related, the patient certainly died from the irritability and weakness which were in-

duced — the bronchiæ, on examination, having been found unobstructed.

This view of the subject seems indeed to require, that the countenance should exhibit a livid, rather than the pallid appearance which has been noticed above: that livid hue would probably be more frequently evident, were it not for the languid state of the circulation; for the blood (if the hypothesis above proposed be in any measure just,) must be, under such circumstances, less oxygenised, and less florid. Yet, if the action of the heart and arteries be at the same time very feeble, it may not be propelled to the surface in sufficient quantity to give that colour.

to the complexion. A slightly livid tinge diffused over the almost bloodless countenance of such patients may, however, often be seen. Where that colour is more fully established, an obstructed state of the pulmonary circulation probably coincides with an interruption of the chemical changes accomplished in respiration. In *Peripneumony*, where these concur, the countenance is usually livid in a striking degree.

Sauvages seems to have entertained some opinions on this subject, not unlike to that which has been just stated; but the consequences which this writer contemplated, were rather of a mechanical than a chemical nature. He

takes it for granted, that the bronchial secretion has the property of a varnish as just stated; but as the theory of respiration was in his time very defective, the only consequence which he deduces from this accident, is the retention of the halitus. He therefore cites the computation of Hales; "that the aqueous exhalation from the lungs equals 22-ounces per diem," and proceeds, "*hoc ergo suppresso infarciuntur vasa excretoria et secretoria pulmonum, tumet textus cellularis, immittitur viarum aerearum capacitas, inde vero respirandi difficultus angustia, dolor.*"

Diagnosis.

The distinction of acute inflammation of the Bronchiæ from Pleuritis, is the only point of nicety which can fall under this head. The Diagnosis may, perhaps, be in some cases difficult; perhaps the peculiarity of the respiration will constitute the least erroneous test: to which may be added, however, the absence of any sharp pain of the side; the presence of a more extended feeling of soreness, uneasiness, or pain, which the patient cannot refer to any circumscribed spot; the power of turning on either side without increasing that pain; an absolute necessity for adopting an inclined pos-

ture of the trunk of the body; to all which, if the wheezing noise should attend, the case will be very well marked. There is, moreover, an anxious distressed countenance, in the bronchial inflammation, which one does not notice in the Pleurisy; the state of the pulse too is certainly different: it is frequent, but it wants the sharpness and vibration of the pleuritic pulse. There seems to be something here in the nature of the part inflamed, which has an influence on the kind of pulse produced; — as in enteritis, and inflammation of the stomach: — the arterial pulsations in these diseases, as all practical writers have noticed, differing much from those

which attend the inflammations of the solid viscera.

Prognosis.

From what has been said of the character and symptoms of acute Bronchitis, it would seem, that of a violent attack, the event must be more than usually doubtful, even if there be opportunity to employ remedies from the beginning. That the danger is far more pressing than in Pleurisy, there can be no doubt: and if we are called when the acute symptoms are on the decline, and those of debility beginning to manifest themselves, the prognosis is still more unfavourable.

Recent cases of *Bronchitis asthenica*, or *Peripneumonia notha*, if there be nothing particularly unpromising in the constitution of the patient, usually do well ; but if an aged or a debilitated person be the subject, especially if he have been subject to the disease before, there is considerable hazard ; such cases in advanced life often end fatally. Nor are the instances few, in which the disease degenerates into a chronic cough, which is attended with difficult respiration, and which exhausts the strength very rapidly. The circulation of the blood through the lungs does not go on with its usual facility ; an habitual congestion takes place, and in many instances, this state

is succeeded by an *effusion of water into the chest*. Of the hydrothorax thus produced, it is of some consequence to know, that it is not necessarily incurable; since it by no means implies any organic affection of the heart, or of the pulmonary vessels: and from it many patients have happily been recovered by the use of mercury, steel, elaterium, and digitalis.

CHAP. VI.

Treatment of Bronchitis Acuta.

Σωμά ἄνταρκες ὃν οὐδὲν διεφάνη πρὸς αὐτο.

Thucyd. Hist. ii. 51.

ALL that can be said with regard to the management of the acute cases of bronchial inflammation, may certainly be comprised within narrow limits.

At the commencement of the disease, when the strength is entire, and the phlogistic symptoms clearly marked, of course the great remedy is blood-letting. This practice, however, though of unequivocal propriety, has not the same success to recommend it here as in other acute pulmo-

nary complaints. The patient frequently dies, where the phlogistic symptoms have lasted long enough to have given a fair opportunity of adopting, and even of repeating, this practice. The extent to which it should be carried, must of course depend upon the circumstances of the individual case. Twelve ounces of blood, taken quickly from a vein in the arm, will perhaps generally constitute a sufficient bleeding in a case of moderate violence ; and of which the possible conversion to a state of debility is so necessary to be kept in view ; but every thing depends on the case. We are only to recollect, that where venesection is proper at all, it is cer-

tainly the remedy, perhaps the only remedy, by which the inflammatory action can be cut short. Here, as in other instances, from the effects of a first bleeding, and the appearance of the blood, we derive instruction as to the repetition of the practice; this is one reason for preferring the lancet to the cupping-glass; and perhaps it will be found, that a patient is very seldom more weakened eventually, by general than by local bleeding (the quantities of blood drawn being equal), though he feel the effects of the former practice more immediately—a circumstance from which it derives its chief recommendation. Except, therefore, in the case of children, the lancet

seems preferable to any other instrument. In their case it is less eligible only from the difficulty of procuring blood from small vessels. A sufficient quantity of blood has however been obtained from children of six or eight years of age, by first opening a vein in the foot, and then immersing it for a few seconds in warm water.

As in other complaints of the chest, after bleeding, a blister should be applied; but the power of this ancient remedy, in the more severe pectoral complaints, would appear to be very limited, and it must be a very slight affection of which it will effect, or even much promote, the cure. With less experience of its inefficacy, the

Author does not incline to think much more favourably of the solution of Antim. Tart. in camphored spirit, applied as a rubefacient to the skin.

It has been long an opinion, that purgatives are not useful remedies in pulmonary affections ; that they are not so important in respect to the local affection here, as they are in diseases of the bowels, is certain ; but as general remedies they are equally useful. An active purgative of the saline kind ought then certainly to be given, as early as possible, and repeated as circumstances may require.

To excite and to maintain a general diaphoresis, is certainly desirable in the treatment of all diseases attended with fever. But medicines given

with this view, are very uncertain in their operation, sometimes proving emetic, sometimes laxative, and often producing no sensible effect. The chance of success with these remedies may be however considerably augmented, by premising the warm bath, and this measure may be of service in other respects. Of the sudorific compounds, the author has found that of aq. acetit. ammon. with liquor. ant. tart. to be the least uncertain. It is necessary, however, to give it in larger quantity, and with more perseverance than is usual. An excess of acid in the preparation of the saline part of the compound has sometimes been observed to increase its efficacy.

The steady employment of antimonials in this disease, is, according to the author's judgment, of considerable importance. The doses should be frequently repeated, and the quantity gradually increased, till the maximum which the stomach can bear without vomiting is attained. Where this remedy succeeds at all, it is of extensive utility: while it takes off the tension of the surface of the body, and proves diaphoretic, it exerts its powers not less equivocally on the exhalents and secreting vessels of the lungs, so as to promote an early and a free expectoration. A mere aqueous solution of the antimon. tart. is perhaps preferable to the vin. antimon. tart. as some of the

salt always precipitates when the latter preparation is kept for any length of time. The solution may be made in the same convenient proportion of four grains to an ounce*.

The instrument contrived several years ago, for the purpose of conveying warm air mingled with the vapour of hot water into the lungs, would no doubt be of service in this and in other

* The *Liquor. Antimon. Tart.* of the present Pharmacopœia is however not liable to the above objection. Of this preparation ʒi. containing the fourth part of a grain, will usually be borne, and may be often repeated. In some instances the mixture of *vin. ipecac.* with this antimonial preparation in the proportion of equal parts, (and the dose regulated by drops,) has answered better than either of them separately, particularly with children.

pectoral complaints, if it did not require so much exertion on the part of the patient. But it is generally found to occasion such fatigue, that it is quite gone into disuse, without perhaps fair experience of its efficacy. So soon as the patient finds that it requires a forced inspiration, he almost always relinquishes it; and, indeed, if any person in perfect health endeavours to breathe for a few minutes through the Inhaler, he will observe, from the efforts he is obliged to make, that, however promising, it is inexpedient in cases where respiration is already laborious or painful.

There is a remedy of some promise in this complaint, of which the chief

recommendation must at present be derived from analogy. Calomel is perhaps the best medicine in the Cyanæhe trachealis, where the febrile symptoms are quite as high, and the local affection similar. As well from this circumstance, as that the Author has had the satisfaction to find its employment followed by material relief in the more chronic inflammations of the Bronchiæ, he would incline to suggest a trial of it in the acute forms of this disease, employing it, as in croup, in small, but frequently repeated doses.

The powers of digitalis would seem to indicate, that it is well calculated for the relief of this disease, but it has

not appeared to merit any superior reputation in the acute species of the complaint. In that which will fall next under consideration, it is of service, and where a disposition to hydrothorax is induced (as it often is) by repeated attacks of asthenic inflammation, it is highly valuable, and frequently counteracts that tendency. The same remedy has also proved in a few instances, serviceable in the bronchial affections of children, and therefore it certainly merits some attention.

If these measures shall prove unavailing, and the symptoms of debility succeed, there is nothing left to the practitioner but to support the failing

strength, and to stimulate the languid circulation. Camphor mixture with the ammonia. ppt. wine, musk, and the various remedies which we employ in nervous fever, are to be used. An emetic may also be tried, but it is doubtful if this practice, under such circumstances, would bear repetition.

CHAP. VII.

*Treatment of Bronchitis Asthenica, or
Peripneumonia Notha.*

IN this disease it is not seldom requisite to commence the treatment by taking a few ounces of blood ; but the inflammatory tendency (if the subject be unfavourable for that practice) may often be, and is more safely reduced by means of purgatives, saline medicine, and abstinence.

The treatment of this complaint is a good deal committed to what are called expectorant remedies. After prescribing these drugs, in many forms

and various combinations, for a good many years, and in some hundred cases; the Author cannot say he thinks highly of their efficacy—and yet some efficacy they have: for it certainly consists with observation, that one shall fail, and another, yet under the use of a third, a patient shall be very sure that he finds relief: although it is true, that by the time he makes trial of the third, a natural period of relief may have arrived.

Those medicines are most likely to prove expectorant, which act generally on the extreme vessels of the surface, and we find accordingly, that antimony and ipecacuanha are among the best remedies of this class. The anti-

monial hydrosulphurets, which have long possessed, and still maintain, so much reputation in the continental practice, are perhaps too much neglected here. The kermes minerale, and the sulphur auratum antimonii, may be exhibited with advantage; but whether they have any essential superiority over the preparations of this metal employed in Britain, is not easy to determine; but they are certainly less apt to induce vomiting.

Ipecacuanha is frequently of service. When antimony either fails, or, from some idiosyncrasy, cannot be administered in sufficient quantity without producing sickness, this drug will be found much more manageable.

When Dr. Akenside long ago recommended it (in a paper published in the Medical Transactions), in asthmatic cases, it was on the supposition that it possessed a considerable degree of anti-spasmodic power. Its virtues may probably be better explained, by its action on the extreme vessels, so as to bring them into a state of laxity incompatible with spasm. It may be conveniently given in doses of a grain, in the *lac amygdalæ*, yet more conveniently in the form of lozenges ; but best in the dose of ten or fifteen drops of the wine, every two hours.

Preparations of squill appear to be of inferior efficacy to the former reme-

dies ; but sometimes do good, and are convenient from their variety of forms. Vinegar is probably the best menstruum of the squill ; but the acetic solution is much more nauseous than the tincture, and requires to be given in much larger doses. Three grains of the powder of squill, with one grain of calomel, and the same quantity of digitalis, taken for some nights in succession, has been, in several instances, productive of material benefit.

The foetid gums enter into the list of remedies which are sometimes found useful in this disease.

Ammoniacum is generally offensive to the stomach ; its emulsion should be

mixed on this account with that of almonds (3iij. of the first to v. of the latter). The circumstance of medicines being rarely exhibited singly, confounds the judgement about their separate efficacy, and this is very rarely given alone: where there are evidently occasional aggravations of the dyspnœa, assafœtida will often render essential benefit, and will sometimes bring on expectoration where nothing else will succeed. It is usefully conjoined, in cases of this complexion, with the spt. æther. vit. comp. of the Pharmacopœia, in the quantity of 3ss. to each dose.

Seneka has obtained considerable character on the continent as an ex-

pectorant ; but is only suited to those cases where the febrile affection is nearly gone, and debility remains. An ounce of the root may be boiled in a pint and an half of water, till one-third has evaporated. Of the strained decoction, the stomach will hardly bear at first more than half an ounce, which may be mixed with ʒiiss of camphor mixture.

Preparations of the volatile alkali are among the best medicines in the advanced stages of this disease. They appear to revive the patient, and to keep up the strength, without being liable to the hazard of spirituous stimuli : 15 grains of the carbonat of ammonia, with an equal quantity of ca-

lumbo, or any other light bitter, form a medicine from which many have derived benefit.

An infant of five or six months old, appeared to be saved by ammonia under the following circumstances: It was so ill that the pulse could scarcely be felt, and the chest so loaded that it could scarcely cough; the respiration was very quick, the skin cold, and the face pale.

Six drops of spirit ammonia camph. were directed to be given at short intervals in a tea-spoonful of camphor mixture. After five or six drops, the mother of the infant, from the strong smell of the medicine, took alarm that some mistake had been made.

The caustic spt. of ammonia had been given by mistake. The child was nearly strangled with every dose ; but the constitution nevertheless rallied under this accidental treatment, and the child quickly recovered.

This, indeed, should be a medicine of great value in all diseases of debility : the Author, recollects to have read a pamphlet, the purpose of which was to recommend it as a remedy of extraordinary power in scarlatina, of course in the secondary stage.

Myrrh has also been found beneficial in the treatment of this disease.

The occasional employment of emetics in the latter stage of asthenic

Bronchitis, is a practice, the utility of which is established. It is however by no means easy to discern the principle on which their benefit depends. They assist in relieving the bronchiæ of the secretions which lodge there, and thus diminish the difficulty of breathing. But besides this, the whole system often seems benefitted by the use of emetics.

Opium should be used with great reserve, if there were no other objection to it, than that it conceals the progress of the disease from the observer. Nor will the urgency of the cough afford sufficient reason for the use of opium. The *cause* of that urgency cannot be subdued, and will

most likely be aggravated by it. In inflammatory affections of the bowels, this drug has been recommended, as well on account of the severity of the pain, as that it enables the stomach to bear other remedies essential to the cure. The practice of employing it in such cases, has accordingly met with advocates of high authority, but nothing of this nature can be urged for the employment of opium in inflammatory diseases of the chest.

While, therefore, there remain the general symptoms of fever, opium is inadmissible : where the constitutional affection is gone, and nothing but irritability remains, it may be used at the discretion of the practitioner.

This disease often leaves so much debility behind it, that tonics are essentially called for. Light bitters, such as the infusions of cascarilla, calumba, chamomile, or cinchona, should be given till a more confirmed convalescence appear. But nothing does so much good (if the season be favourable for the experiment) as change of air ; under which the patient will more sensibly gain ground, after a certain period, than by any combination of medicines.

CHAP. VIII.

History and Treatment of Chronic Coughs, &c.

THE remarks which have been already made with regard to the more pressing affections of the bronchiæ, have left little to be said concerning the chronic sub-inflammatory state of these parts, from which mostly proceed the variety of coughs with which every one is so familiar.

In consequence of some more severe affection of this nature, the parts which had been previously in a state of over-excitement, often fall into an opposite state of debility. The con-

sequence of this will naturally be, a diminution in the activity of the smaller vessels ; the circulation may become so languid, as to keep these vessels (as occurs in some species of inflammation of the eyes) in a state of undue distension, though without the urgent symptoms which attend a genuine inflammation. So long as this state continues, there will be a morbid irritability of the parts, so that the slightest occasional causes will bring on cough and uneasy respiration. The degree of constitutional affection which attends may be greater or less, but there is always a slight disposition to fever, disorder of the digestive organs, and general debility.

This complaint is chiefly incident to people who are past the middle of life, and who are debilitated from any cause. In persons who are used to drink spirituous liquors, it is attended with more fever; of course, they suffer more from it than others. A cough comes on early in the winter, and remains for many weeks or months: The parts become so irritable, that a slight alteration in the atmosphere is sensibly felt; sometimes conducing to the relief, at others to the aggravation of the symptoms, according to the nature of the change. Such patients have always an uneasy respiration, often a sense of weight, or of fluttering, as they term it, about the pit of the stomach,

with a white tongue, a bad digestion, and an impaired appetite. The sputa are usually copious, viscid, and tenacious; at others, of moderate consistence, and frothy. There is no pain in the chest.

In many instances the cough is quiet, unless when the patient begins to move, and then it is instantly excited. Some have it worse after taking food, and almost all, cough with increased frequency and violence for an hour or two in the morning, and have no ease till they have relieved the chest of the secretion which had accumulated during the night. The urine is commonly high coloured,

and the pulse both weaker and quicker than natural.

There is another variety of this affection, in which we hardly find any constitutional symptoms. Cough, with profuse expectoration and uneasy breathing, are complained of; and yet we find the subject of the complaint sometimes free from fever, and not unfrequently with a pulse preternaturally slow. In such cases, as we can hardly suspect inflammation, the redundant secretion depends probably on mere debility of the secreting organ—whatever be the state of the parts, the existence of such a variety of the complaint is not at all doubtful.

As to the treatment of these affections, there is one leading circumstance to direct it: they are all attended with debility, more or less, and they require tonics and stimulants.

If there is any fever, it should be kept under by the exhibition of saline purges, and infusion of senna. In this way, combined with a rigorous interdiction of all spirituous liquors, the febrile affection may usually be moderated. The shortness of breath is not considerably relieved by the application of blisters. From observing that the relief which they afford to such patients, is chiefly confined to the period in which they are exciting the action of the cutaneous vessels, before

any vesication is produced, the indication has been pursued, and a stimulating liniment has been sometimes rubbed over the whole chest with sensible advantage. An extensive action on the surface is of course more likely to do good, than a very limited one. One part of the liq. ammoniæ (if it has been recently prepared) with seven or eight of oil, will be found to answer this design: or a strong solution of antim. tart. in water mixed with a quantity of camphorated spirit of wine: or a blister may be kept on for one hour, (or till it make the parts red,) and renewed occasionally without producing vesication.

In the greater number of cases, ex-

pectorant remedies, supposing that there are any specifically such, would not be indicated here. The secretion is already redundant: on what principle therefore could we prescribe medicines supposed to have the power of promoting it? There is no more propriety in their exhibition in such a complaint as this, than there would be in using cathartics in diarrhœa.

The remedies called for in this disease, are tonics, and moderate stimuli: bitters of all kind, chalybeates in small doses, the mineral acids, &c. change of air.

Nothing suits the intention in general, better than myrrh, of which fifteen grains, with ten of the ammonia

ppt. may be given twice a day. A light infusion of cascarilla, or of calumba, or small doses of these bit-
 ters in powder, combined with a few grains of pulvis aromaticus, are also beneficial. In many instances, the ferri carbonas, conjoined with some aromatic, is of considerable use, and having no inky taste, can be conveniently given in the form of electuary. One part of this preparation with four of myrrh, and three of the syrups of ginger, of orange, or of saffron, will be found to constitute a pleasant and an efficacious medicine, of which a small tea-spoonful will be the ordinary dose.

White vitriol is often of considerable use. A grain may be taken three

times a day ; but it should be given in the form of a pill, otherwise it is apt to occasion sickness.

The use of opium in this disease is almost unavoidable ; but those who are familiar with it know, that they cannot by its aid effectually suppress the cough, for it depends on causes which opium cannot remove. It is better to give a full dose at night, in order to secure rest, than to mix it, as is more usual, with all the medicines employed in the treatment of the case. There are instances in which the extract. *cicutæ* has appeared to mitigate the cough essentially, and the Author, from having found it serviceable in whooping cough, has often employed it

in this disease. The extractum papaveris has also been employed, but with no claim to superior recommendation.

An uniform, moderate temperature, to be secured only by confinement to the house during the unfriendly winters of this climate, is a measure about the propriety of which (where it can be adopted) no person can doubt ; while to the convalescent of this disease, there is no measure more certainly beneficial than a retreat into the country, when the season is sufficiently advanced.

Of the respiration of factitious airs, the Author has no experience. But he cannot refrain from noticing, that if any advantage shall accrue to medi-

cine from their employment, it might probably be expected in these diseases. The advantage of immediate application to the parts, would make a trial of them at least plausible; and there is sufficient variety in the qualities of the airs themselves, to admit of accommodation to all circumstances*.

* Several cases are recorded in the Medical Essays published by Dr. Ferriar, of Manchester, in which factitious airs were tried, and without effect. That phthisical patients were not relieved, we do not wonder, but the hydro-carbonate was steadily tried in cases of chronic cough, and it did no good.—Vol. ii. Appendix.

SUPPLEMENT.

*Observations on those Diseases in which
Matter is formed in the Lungs.*

MATTER may be formed in the lungs by various processes, and deposited on various parts of the organ, either in a situation favourable for expectoration, or in one in which expectoration is impossible.

I. To the first head belong three kinds of disease :

1. The simple abscess of common inflammation.

2. The suppurated tubercle of pulmonary consumption.

3. Purulent secretion from the air cells, or bronchiæ, without loss of substance, or change of structure in the part.

Although the second of these cases be of a very hopeless kind, and the third scarcely less so, recovery from the first, is by no means to be despaired of, notwithstanding that it is a disease of great hazard and alarm. To detail the progress and event of a case or two of this kind, which I fortunately have it in my power to do, will prove not uninteresting to such readers as may not have met with similar instances; while it may give encouragement to

such as are actually witnessing or suffering the disease.

II. To the second head belongs extravasation of matter into the cavity of the chest, constituting the disease called Empyema, and curable only by a surgical operation.

On Abscess of the Lungs.

THIS disease is far from uncommon, and accounts of it may be met with in almost all medical writings from the earliest ages downwards. It is not my intention, however, to enter into this subject, further than to notice that the complaint is incidental to climates and to situations where one should not a priori expect it; that it fell frequently

under the treatment of the Greek physicians ; that it is a common disease at Florence, and that hundreds fall victims to pleurisy in Campania.

In more favourable climates, however, the chances of recovery seem to be vastly greater; for Aretæus, after an uncommonly accurate picture of the disease, says, people *for the most part* recover, except the quantity of matter (on the bursting of the abscess) be so great as suddenly to suffocate them*.

* Περιγιγνονται δε τα πολλα ει μη κοτε τις αναπνιγη αθροη ελκυσι του υγρου της Αρτηριης ου δεχομενης τον αερα πληθει του πνυου. He adds, however, that others linger on and die with the symptom of Empyema, or Phthisis. θνησκουσι μετεξετεροι χρονω, τον Φθινωδεα, και τον Εμπυϊκων τροπον.

The formation of abscess in the substance of the lungs is an extremely treacherous process; and is carried forward with such moderate symptoms, that observers the most interested and attentive may very easily be deceived. Even the functions of the organ more immediately suffering, are, in many cases, but little deranged, nor are the constitutional symptoms of such a kind as to excite an early alarm for the fate of the patient, or a clear perception of the necessity of adopting active measures for his relief.

If the symptoms of common pectoral inflammation—pain in the part, difficult or *rapid* breathing, cough and fever, are not subdued or moderated

within a week from the attack, I should fear that the formation of abscess is a probable termination of the case, and the more so, as the primary symptoms were moderate: if a fortnight should elapse, before remedies are used, or without these proving successful, I should expect that the tendency to abscess, if it exist, can no longer be counteracted.

Many marks, by which to recognise the issue of the disease in the formation of matter, have been detailed by practical writers; of course they will not all occur in one case, and they must also be liable to diversity from the situation and size of the abscess;

and the degree of fever which attends its progress.

1. The *time* which is consumed in the suppurative process, and the bursting of the abscess, liable as these are to be affected by many causes, will depend chiefly on the violence of the symptoms and the substance of the cyst. The 20th day is put down by most practical writers, among others by Bürserius, as the most common in the latter of these occurrences ; but when we read that it may be deferred to the 40th or the 60th, the information becomes of small importance.

2. The ordinary *symptoms* of an abscess formed, are, an increase of cough,

which continues, however, dry; accelerated respiration, or difficulty of breathing, much increased after food; continuance of fever: to these some writers add loss of appetite; others, I think more justly, increase of appetite, together with *emaciation*. Partial sweats about the head and breast are also frequent symptoms; and foetor of the breath not uncommon.

The consequences of the rupture of an abscess are either a speedy concretion of its sides, and a rapid recovery of the patient, or a particular species of consumption, equally untractable and equally hopeless with the common Phthisis. As to the chance of

the patient being suffocated at the moment of rupture by the *quantity* of matter, I should expect it to be very small: if it ever occur, it is an event surely not to be deplored, since it cannot be reasonably expected that an abscess, of a size capable of discharging such a deluge of matter, would heal supposing it were evacuated.

Some writers have recorded absorption from the purulent sac, metastasis to the kidneys, and discharge of the matter by urine, as a possible occurrence: it is at least a very unfrequent one.

Such are the best ascertained cir-

cumstances concerning Pulmonary Abscess succeeding to common inflammation.

I shall now lay before the reader, in further illustration of this subject, the result of my own experience ; and this in as few words as possible.

Ten years ago there fell under my care a man, who had laboured under a pleuritic attack of considerable violence, and who had been bled, as it was thought, sufficiently. The disease however was not stopped, and he applied to me, decidedly in a consumptive state. He remained under my care a number of weeks, expect-

torating large quantities of matter, having night sweats, cough, fever, emaciation. I took no notes of the remedies prescribed for him; but recollect particularly to have given in his case a very full and fair trial of *Digitalis*—a remedy at that time more in esteem than now. These unfavourable symptoms all subsided by degrees, and the patient in the course of the summer returned to perfect health.

The next case that occurred to me, was of a very interesting kind. A fine boy, the son of a medical friend, took the measles, and went through them not unfavourably, but with so much of pectoral disorder in the very

first instance as to require bleeding very early, which was done under the orders of an experienced physician. The recovery of the patient however was not accomplished; on the contrary he came home with pain in the side, cough, fever; quick breathing. With these symptoms he kept his bed for many weeks, and rapidly lost his flesh and strength, to as great a degree as I have usually witnessed in true pulmonary consumption. No expectoration whatever attended; and in the more advanced stages of the disease one or two long loud fits of coughing, (so long and so loud as to have suggested some suspicions of whooping-cough to the attendants) took place

in the course of the night. . This was indeed the *kind* of cough throughout ; it was never of that teasing slight character with which true consumption is generally attended. During the whole progress of this very anxious case, I had always a suspicion that it was to end in the formation of matter : which was also the opinion of the gentleman who had so deep an interest in its issue. But I remember that one physician considered the case to be fever only, and quite rejecting all suspicion of the lungs being the seat of the complaint, (which I mention only to shew that the symptoms *were* obscure, and such as a medical man might mistake,) recom-

mended a plan, of which the adoption would have much increased the hazard of the case.

I was sent for one afternoon very suddenly, and found the little patient had just discharged a very considerable quantity of matter by coughing, which had greatly exhausted him. The nature of the disease was no longer doubtful: the treatment I think it unnecessary to record, since it had plainly no effect in abridging the disease, scarcely any in palliating the symptoms. I will merely say, that the supply of nourishment was carefully attended to, the state of the bowels rendered favourable, fresh air constantly supplied, a mild tempera-

ture maintained in the apartment ; and that in consequence of all these precautions, after a long illness of four months, no symptom of the disease remained behind.

The next case (which occurred little more than twelve months afterwards) was one in which I was myself deeply interested. The subject of it one of my sons, then aged six years. The first symptoms of inflammation in the chest were slight and dubious, but the fever was great and ushered in by regular shiverings : the weather (the middle of September) being warm and the cough very slight, the hurried breathing which attended from the beginning, was

thought to be not improbably the consequence rather than the cause of fever, and on the supposition that the latter was excited by disordered bowels, calomel and other purges were given, but no alleviation was obtained; a total loss of appetite and intense thirst became immediately very prominent symptoms of the complaint.

On the ground that the disorder *might* be on the lungs, rather than from a conviction that it *was*, a few ounces of blood were, as a precautionary measure, taken by leeches during the first week of the complaint, and a blister was applied; on the third day he complained of, or, more pro-

perly *mentioned*, a pain in his side. This he did, not more than once or twice, unless he were asked. Whatever measures I had any opinion of, were of course soon adopted, and carefully pursued; Digitalis was largely and steadily tried, and that for a long time: the source of the fever continued doubtful, and no one I think could have undertaken for certain to say *where* the disease was situated for several weeks.

The pulse was 120 through the whole disease; and Digitalis, given every two hours punctually, in doses of twenty and thirty drops to a boy six years old, *had no effect whatever in altering it*: neither had saline me-

dicines, nor antimonials ; nor could he ever be made to sweat in any part of the complaint.

On the 35th day the abscess broke, and about half a tea-cup full of matter was spit up. The child, who had been always excessively robust, and very large for his age, was at this period as much emaciated as was possible, and perfectly helpless from weakness.

On the next day, a second discharge of matter, less in quantity, succeeded.

Then nine days elapsed without any further expectoration, some of them passing with scarcely any cough ; but on the three last days, this symptom became more troublesome than it

had ever been ; and he now coughed in fits, frequent, long, and violent.

On the 50th day the respiration was just as quick (and *this* was always the most prominent symptom of the disorder) as it had ever been. But the appetite continued quite sufficient, and for the last fortnight the emaciation was thought to be at a stand. The pulse, however, was still 120. A diarrhœa, which now came on, and lasted for several days, was contemplated under the circumstances as a very serious occurrence.

From the 37th day to the 50th, no matter had been discharged, and the abscess was supposed to have

healed. But why did the quick respiration and the pulse of 120 continue? The reason soon appeared to be the presence of a second abscess; for on this, and for five succeeding days, he spit up matter anew, and on the 59th day, a large quantity at once (not less than a tea-cup full) much thicker and more yellow than before.

The succeeding week was marked by symptoms of great amendment. Cough occasionally, but slight; the pulse now and then as low as 86—90, though still quicker towards night. The respiration now became nearly natural; towards morning quite so. Perhaps some increase of flesh; appetite and spirits excellent; no heat of

skin remained, and on the 65th day I considered his convalescence as complete.

I remarked on one day only a hec-
tically-flushed countenance. It was
the afternoon of that on which the ab-
scess first broke. The urine from this
time always deposited a lateritious se-
diment. For one week the appetite
failed; up to this time it had been ra-
ther too good to admit of being fully
satisfied with propriety. He never
was allowed wine, and took no bark
or other tonics. I do not believe that
any medicines given throughout the
complaint were of the least use.

In conversation with medical friends,
during this anxious period, I heard of

two or three cases of a similar nature, which had occurred to them with an equally prosperous result; one, of a farmer in this neighbourhood, whose recovery was surprising for the great *quantity* of matter he threw up; the other of a child (under the care of Dr. Wall, at Oxford), who also struggled through the same exhausting process to perfect convalescence.

I cannot better conclude this part of the subject, than in the words of Dr. Cullen:

“ An abscess of the lungs is not always followed by Phthisis: sometimes a hectic fever is not formed: the matter is benign pus, easily spit out, &c. This has happened so frequently, that

we may conclude that neither the access of the air, nor the motion of the lungs, will prevent an ulcer of these parts from healing, if the matter be well conditioned.

“ It is when the matter has an *acrimony*, that being absorbed, it produces hectic fever, and its consequences.”

“ This commonly depends on some *predispositions* to Phthisis*.”

II. Of the second genus of disease, *the abscess of suppurated tubercle*, I have not any remark of importance enough to offer. On the

III. *Chronic purulent expectoration, with little fever, and probably no ab-*

* First Lines, DCCC, XXVIII.

success, I can throw no more light than the detail of the following case, which however, though solitary in my experience, is to be paralleled, I have no doubt, by that of many who may read it.

In this disease the whole of the bronchial system seems to acquire the power of secreting matter, and the constitution is undermined by an extremely slow and treacherous complaint.

The subject of the present case was also a child aged six years, or thereabout: the disease began with no very threatening symptoms, and was the subject of much perplexity from its frequent remissions (often approaching

almost to a removal), and returns. A leading peculiarity throughout, was that the function of the lungs *was very little impaired* — often not at all, while the patient lay asleep, the respiration being generally as tranquil as in health. Of the constitutional symptoms, *cough* was the most prevalent: this seldom declined for any great length of time, and was, during the whole of the long period, when I had the opportunity of noticing the disease, attended with expectoration, — this commonly, but not always, of purulent appearance. Though the appetite was often feeble, and the little patient had a look of peculiar delicacy, yet eighteen or twenty months after

the commencement of the disease, her thinness could still hardly be termed emaciation.

Nor were the attacks of fever at any time very urgent: what however they wanted in urgency they acquired in frequency, and were excited by taking a little cold, though this was most carefully guarded against, and by other slight causes. The complaint first began in the autumn, continued through the winter, and was almost lost sight of in the ensuing summer. After this time a series of remission and relapse marked the progress of the mischief; but even during a second winter, no urgent alarm was created; the little patient never kept

her bed, and was not by any means incapable of being amused, or very sensible of the disease. The quantity of matter seldom exceeded and often did not equal a tea-spoonful in the day, even at this advanced period of the complaint. A third winter began; and though it was got over with less of cough than the last, a great and formidable relapse recurred early in the spring, attended by much suffering, and quickly terminated the existence of an amiable and promising child.

The remedies tried at various periods of this long illness, at the recommendation of several physicians consulted on it, never did more than pal-

liate the feverish attacks for the moment, the principal symptoms of the disease only becoming moderated for a time.

As to the nature of the complaint, it wanted so completely the symptoms of abscess and of consumption (not to say that children very rarely are the subjects of true *Phthisis Pulmonalis*), that I know not how it can be interpreted otherwise than on the supposition of a chronic inflammation of the secreting membrane of the bronchiæ. Regarding it therefore in this light, as a kind of Tracheal consumption, the observation of Aretæus might almost be supposed to have had such a disorder in contemplation: "it is won-

derful," says he, "how from a membrane, of so little depth and solidity, so great a quantity of matter can be supplied."

Θωυμα δε, οκως εξ υμενος λεπτου τε και ισχυου, βαθος ουκ εχοντος, τροσονδε ρειι πνον.

Cases of Disease on the Trachea.

CASE I.

JAMES HUNTER, Ætat 47.

1806. December 1st. — Violent cough, with great hoarseness, but no pain, inspires without uneasiness, but has some Dyspnœa, p. above 100, but weak, lies indifferently on either side, more Dyspnœa on his back, t. whitish, b. open, had these ailments twelve.

months ago, they went off in consequence of a sea voyage, but returned three months ago, has lost flesh.

3rd.—Better, comes out.

6th.—Relapse, confined again to bed.

10th.—Better.

18th.—He appears to waste and to get weaker.

February 1st.—*Died*, was delirious two hours before. On examination of the Trachea, a small ulcer was found near the larynx; the lungs were sound.

CASE II.

A gentleman, aged about forty-eight, took cold under circumstances

of very hazardous exposure, during the winter season. On arriving at his home, he was attacked with difficulty of breathing, and obtained relief by ordinary treatment. The source, however, of a fatal disease, which terminated his existence in about three years after great sufferings, was already laid, and no remedies employed during so long a progress of the disorder were attended with any benefit worth noticing.

The symptoms were these: a singing noise in the trachea during inspiration, so loud, and attended with such labour in respiration, as to distress any person who stood by. The rate of breathing was as slow as na-

tural, the chest easily distended to its full capacity without inducing cough or pain. Motion, however, so very much increased the local uneasiness, that he could scarcely (though his strength was not in the smallest degree impaired, and he had been a remarkably stout man) walk across his garden, and the pulse never exceeded 64.

It is remarkable that the tightness and sense of strangulation in the trachea were liable to considerable variety; at times I have scarcely remarked them, nor did any particular kind of weather seem to have a decided influence in renewing the attacks. He would often sit down to table with good

appetite, and yet not dare to swallow a mouthful, from the sense of suffocation while the food passed behind the obstructed part of the trachea. Under the pressure of more violent attacks, he could not lie down in his bed, but was supported in a sitting posture. At times a very long and violent fit of coughing took place, usually in the morning, which never ceased till he had got up a small quantity of tenacious phlegm. — This came, as he was sensible, immediately from a part on which he could place his finger.

The last and fatal attack was marked by a sudden increase of these symptoms: no fever whatever attended; they were the symptoms merely of an

increasing contraction in the trachea, till air could no longer pass. The sufferings of this patient during forty-eight hours far exceeded any which I have ever witnessed. A very short time before he died he got out of bed without any assistance.

The parts were not examined; it may be safely presumed that there was a considerable change of structure in the trachea; but since there was neither fever, nor purulent secretion, probably without an ulcer.

CASE III.

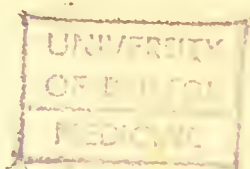
The local symptoms of this case, which happened at a much earlier period of life, and which was also of

long duration, were a huskiness in the throat, liability to cough, and a total loss of voice, which was never recovered. On the examination of the parts, the marks of previous ulceration which had healed, and of one which had not, were discovered in the larynx. The loss of voice had not attended in the smallest degree either of the former cases, probably from a difference in the situation of the disease.

On the subject of an acute inflammation in the trachea in an adult, see Dr. Percival's case in the Medical Transactions, Vol. III.

THE END.

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